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10/015,677	12/17/2001	Patrick Baudisch	D/A1188Q2	5086

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EXAMINER	
BELL, PAUL A	

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 12/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/015,677	BAUDISCH ET AL.	
	Examiner	Art Unit	
	PAUL A BELL	2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hogle IV (5,923,307) in view of Ludtke et al. (6,501,441).

With regard to claim 1 Hogle teaches a method for displaying a perceived continuous image across first and second display areas, each display area having a given display resolution (SEE Hogle figures 3 and 4) comprising: a) providing a source image to be displayed on the first and second display areas (figure 4, items 41 and window C), b) providing a first and second portions of the source image to be displayed on the first and second display areas respectively (figure 4, items 41 and 43 and window C), wherein the second image is a scaled portion of the first image such that when the images are displayed on the first and second display areas the resulting image appears substantially continuous to a viewer situated to view the image(figure 4 and column 2, lines 1-13), and c) transmitting the first portion of the source image to the first display area and the second portion of the source image to the second display area (figure 3, items 330, 332 and 306).

Hogle IV does not directly illustrate the claim limitations; "and the display resolution of one display area is different than the display resolution of the other display area comprising:"

..... "and the displayed resolution of the first portion of the source image is different from the displayed resolution of the second portion of the source image,"

However Hogle IV is viewed as being suggestive of these features stated above. For example Hogle IV does illustrate displays having different resolutions in figures 9(a) and 9(b) . And Hogle states in column 2 lines 1-8 his objective is to, "arranges multiple monitors in logical space to form a contiguous and non-overlapping region by determining relative positions in logical space for the monitor spaces, comparing the relative positions of the monitor spaces, and positioning the monitor spaces in logical space based on a result of the comparing".

Note how the image of the "computer" got bigger when going from figure 9(a) (1024X768) to 9(b)(800X600) by changing the resolution and that's because the display pixel got larger. Therefore Hogle IV here is clearly illustrating the problem of different resolutions when trying to have contiguous images as illustrated in figure 4.

Further note in column 2, lines 8-13 Hogle IV states "The comparing and positioning are performed upon initialization of the computer system and/or automatically in response to a geometry change (e.g., add/remove/move monitor, change a monitor characteristic **such as** a **resolution** parameter)".

Therefore it is clear that Hogle intended to solve the same problem present in which there are displays with different resolutions to maintain a contiguous image over multiple displays. It may not however be clearly anticipated in view of Hogle alone how he did it. There are two obvious methods Hogle can use, for example he could just if possible make them all the same resolution provided they all had a common resolution setting but this would only work if each monitor space is also the same total physical size and this is clearly not the case in Hogle

figures 8(d), 8(e), 13(a), 13(b). The second and most obvious method would be to set each monitor to the best resolution setting possible, and simply perform the well known simple mathematical function of "scaling" each image data portion for each monitor space so as to maintain the contiguous image across monitor spaces. It is obvious that one of ordinary skill in the art would have been motivated to do use the second method because it would provide the sharpest total image.

Now Ludtke et al. (6,501,441) taught a method of and apparatus for partitioning, scaling and displaying video and/or graphics across several display devices.

Ludtke et al. states in column 2, lines 59-63;

"An alternative means of achieving a large display system is to scale the video stream across many discrete display devices. Wall-of-video configurations include multiple display devices arranged together to present a video presentation."

Ludtke et al. further states in column 3, lines 41-60;

"In one aspect of the invention, a method of displaying images on a multiple display configuration including a plurality of display devices includes the steps of determining capabilities and characteristics of the display devices, partitioning an image into a plurality of image sections each corresponding to a display device within the multiple display configuration, assigning each image section to a corresponding display device, capturing each image section corresponding to each display device from an original data stream, **scaling each image section for each display** device thereby forming scaled image sections corresponding to each display device and displaying the corresponding scaled image sections at each display device at an appropriate time thereby forming a magnified image across the multiple display configuration representing the image. The method further includes the steps of determining display dimensions of the multiple display configuration, determining image dimensions of the image and calculating a size of each image section. "

Ludtke et al. further states in column 12, lines 66-67 and column; and column 13, lines 1-12.

"When expanding and scaling its image section, each display device must scale each line and pixel within its image section from the partition size to the final display size. The scaling factors are the ratio of the partition size to the resolution of

the display device and are calculated according to the following equations:
(3) ScaleX = display_horizontal_resolution / partition_horizontal_resolution
(4) ScaleY = displayvertical_resolution / partition_vertical_resolution

Once the scaling factors ScaleX and ScaleY are determined, each pixel is multiplied by the scaling factor ScaleX and each line is multiplied by the scaling factor ScaleY in order to generate a full-size screen image for display by the display device."

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Hogle IV apparatus to implement the features; "and the display resolution of one display area is different than the display resolution of the other display area comprising:" ..... "and the displayed resolution of the first portion of the source image is different from the displayed resolution of the second portion of the source image," as taught by Ludtke et al. because setting each display at there best resolution and scaling the data would provide the sharpest total image.

With regard to claim 2 the combination of Hogle IV and Ludtke et al. teaches the method of claim 1 wherein the source image is provided by at least one computer readable file (SEE Hogle IV figure 1, item 302).

With regard to claim 4 the combination of Hogle IV and Ludtke et al. was found in claim 1 above to cover most of the limitations in claim 4 in addition he is now claiming "n display areas" with "n portions of the source image" wherein claim 1 he claimed "first and second display areas" with "first and second portion of the source image" so n =2 is a specific case of claim 4 so the combination also reads on claim 4.

With regard to claim 5 the combination of Hogle IV and Ludtke et al. teaches the method of claim 4 wherein the source image is provided in at least one computer readable file (SEE Hogle IV figure 1, item 302).

With regard to claims 3 and 6 the combination of Hogle IV and Ludtke et al. does not directly illustrate the method of claim 1 or 4 wherein the source image are provided by at least one video camera. The recitation "images are provided by at least one video camera" are merely directed towards an "obvious intended use" of the combination of Hogle and Ludtke et al. apparatus because the combination of Hogle and Ludtke et al. have and use image files and how they were produced is not critical to practice of his invention and to use a video camera to generate an image file would have been one of many obvious sources of video data (also See Ludtke et al. figure 2 shows item 20 "VIDEO SOURCE").

With regard to claim 7 the combination of Hogle IV and Ludtke et al. was found in claim 1-6 above to cover most of the limitations in claim 7 in addition he is now claiming "capturing a first and second video image" (SEE Ludtke et al. figure 7, item 222 and figure 9 item "FROM VIDEO SOURCE 20").

With regard to claim 8 the combination of Hogle IV and Ludtke et al. was found in claim 1-7 above to cover most of the limitations in claim 8 in addition he is now claiming; " the source image is scaled using a scaling factor and the scaling factor of at least one of the n

portions of the source image is different than the scaling factor of at least one other of the n portions" (SEE Ludtke et al. column 12, lines 66-67 and column lines 1-10) .

3. The prior art made of record and not relied upon is considered very pertinent to applicant's disclosure.

Butler et al. (6,018,340) also teaches a virtual workspace made up of two monitors (SEE figures 7 and 11(a)) clearly illustrates monitors of different size that do not share a common top or bottom but still note how the image is continuous of item 90 window across the two different size displays (column 8, lines 1-20). This reference illustrates the same end results as applicants. Further NOTE this reference make a reference to the Hogle, IV reference (5,923,307) (SEE Butler et al. column 8, lines 1-20) for an illustration of different size displays.

Odryna et al. (6,104,414) teaches a video distribution hub and display method are disclosed capable of driving a plurality of video display monitors as a virtual monitor or monitors. Also Odryna et al. clearly states, in column 2, lines 1-15 that;

"Additionally, a single hub can drive displays of **differing resolutions** as well as head orientations. The hub, in combination with host software, can be automatically reconfigured when a display is swapped out to accommodate the newly substituted display. In a preferred embodiment, the hub is particularly adapted for driving a plurality of flat panel displays such as active matrix flat panel displays, dual scan passive flat panel displays, or a combination of such displays."

And Odryna et al. states in column 10, lines 60-65;

"How much data to store is calculated by the control circuit 44 based upon display size, **resolution,** and orientation as learned from the respective head 28 via the DDC backchannel."

And further Odryna et al. states in column 14, lines 53-54;

"The video distribution apparatus of claim 1, wherein said plural video output signals represent contiguous portions of said video input signal."

Arcuri (H0001812) teaches a method of encoding and storing locations of bounding boxes of drawing primitives to be rendered on a multi-resolution display that includes a plurality

of **regions of different resolution**, at least of which is subdivided into a plurality of sub-regions. Also see figure 4.

Response to Arguments

4. Applicant's arguments with respect to claims 1, 4, and 7 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues that; "Hogle IV, does not, and indeed can not, scale an image to provide a continuous display with portions displayed in different resolutions".

The examiner disagrees because the Hogle IV apparatus is clearly capable of scaling an image to provide a continuous display with portions displayed in different resolutions in view of the teachings and motivation provided by the analysis art of Ludtke et al..

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Bell whose telephone number is (703) 306-3019.

If attempts to reach the examiner by telephone are unsuccessful the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377 can help with any inquiry of a general nature or relating to the status of this application.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or Faxed to: (703) 872-9306

Paul Bell
Art unit 2675
December 4, 2004

CHANH NGUYEN
PRIMARY EXAMINER